

CLAIMS

1. A method comprising steps of:

inserting a catheter into a body at a selected location;

5 positioning at least one electrode and irrigation and aspiration port in said body so that one or more electrodes are proximate to the tissue to be treated;

allowing passage of a flowable substance through said one surface; and

delivering any of energy and chemical treatment from at least one electrode proximate to said one surface.

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2. A method as in Claim 1, including a step of independently controlling at least a first and a second in a sequence of electrodes included in said at least one electrode.

15 3. A method as in Claim 1, including a step of inserting said catheter either laparoscopically or manually into said selected location, using a guidewire introducer sheath if necessary.

4. A method as in Claim 1, wherein said applied energy includes one or more of:

20 RF energy at about 300 to about 500 kilohertz;

photodynamic therapy;

microwave energy in about the 915 megahertz to 2.45 gigahertz range;

sonic energy; and

infrared;

25 and wherein said chemical treatment includes one or more of:

enzymes;

acid-base reactions;
radioactive tracers; and
chemical desiccants.

- 5 5. A method as in Claim 1, including a step of providing a liquid-tight seal in a region proximate to said selected location.
6. A method as in Claim 5, wherein said step of providing a liquid-tight seal uses a shielding element, said element including any of an inflatable balloon, a sponge
10 and a polymer shield.
7. A method as in Claim 1, including a step of aspirating said tissue so as to conform it to the at least one electrode.
- 15 8. A method as in Claim 1, including a step of delivering electromagnetic energy from said selected location to a location outside said body.
9. A method as in Claim 1, wherein said step of delivering energy includes a step of providing at least one of:
- 20 an electromagnetic impedance sensor;
an optical sensor;
a conductivity sensor;
a pH sensor;
a pressure sensor;
- 25 a temperature sensor; and
a sensor that detect nervous activity.

10. A method as in Claim 1, including a step of regulating a temperature proximate to said selected location.

5 11. A method as in Claim 10, wherein said step of regulating uses a chilled liquid disposed proximate to said one surface or the interior of said balloon.

12. A method as in Claim 10, wherein said step of regulating relies upon the volume of the said chilled liquid to shape said balloon so as to occupy the interior of
10 said body cavity and bring said at least one electrode into proximity with said body cavity.

13. A method as in Claim 12, including a step of manipulating a pullwire to alter the shape of said balloon to bring said at least one electrode into proximity with said
15 body cavity.

14. A method as in Claim 1, including a step of manipulating a pullwire to alter the position of a set of umbrella-like struts to bring said at least one electrode into proximity with said body cavity.
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15. A method as in Claim 1, including a step of delivering a flowable substance to said selected location, said flowable substance being responsive to any of said energy and chemical treatment.

25 16. A method as in Claim 15, including a step of eliciting a selected response to any of said energy and chemical treatment.

17. A method as in Claim 16, said step of eliciting said selected response including any of the steps of:

receiving any of said energy and chemical treatment for any of ablation,

5 coating, expansion, plumping, shaping and shrinking tissue;

mapping position of nerves and stimulating them;

shrinking a sphincter by creating a pattern of thermal lesions;

reducing compliance or stiffness in a tissue;

reducing strain on a tissue by changing the relative geometry thereof; and

10 delivering a drug.

18. A method as in Claim 1, including a step of controlling application of said energy and/or chemical treatment within an interior region of a body cavity.

15 19. A method as in Claim 18, wherein said step of controlling application includes a step of distributing said energy and/or chemical treatment uniformly in said interior region.

20 20. A method as in Claim 1, including a step of delivering a flowable substance from outside the body to said selected location.

21. A method as in Claim 20, wherein said flowable substance includes at least one of: a drug, a gas, a radioisotope, an analgesic, an antibiotic, an anti-inflammatory, an anti-spasmodic and a bulking agent.

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22. A method as in Claim 21, wherein said bulking agent comprises any of:

microbeads suspended in a delivery vehicle;

glycerin; and

saline.

5 23. A method as in Claim 1, wherein said selected location is disposed within a human being or other mammal; and said energy and/or chemical treatment is delivered proximate to said selected location to a sphincter, to muscle tissue, or to nerve tissue.

10 24. A method as in Claim 23, wherein said sphincter or tissue is proximate to a bladder, esophagus, uterus, fallopian tube or vas deferens, sinus cavity, aorta, larynx, or pharynx.

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15 A method as in Claim 23, wherein the sphincter or tissue includes any of: the trigone area of a bladder, the detrusor muscles of a bladder, the bladder neck and the urethra and nerves that inform any of said trigone area, said detrusor muscles, said bladder neck and said urethra.